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The socioeconomic status and family context of eating attitudes and dietary behaviours of children in Polish primary schools

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Summary

The aim of the present study was to assess the correlation between the results of the Polish version of Maloney's ChEAT-26, the socio-economical status of pre-pubertal pupils from Krakow schools and their family situation. The study group comprised 218 pupils that attended Grades from 4 to 6 and their mothers. The children's ChEAT-26 results were related to family structure, emigration, parental education, the mother's state of health and her subjective judgement of her state of health and her family circumstances, employment status and financial circumstances. Disordered eating attitudes of the children were elevated in families where one of the parents had emigrated. Parents with higher education levels tend to have a stronger influence on their child's eating habits. The children of such parents are more aware of dietary standards, they tend to control their eating habits more but they also get less pleasure out of eating food. Having the mother achieve professional success, in her estimation, turned out to be positively correlated with an increased desire in her child to lose weight. A mother's positive assessment of her family was correlated with her child's greater compliance with the principles of healthy eating. Some of the observed correlations were different in the boys' group and in the girls' group. Any discussion concerning the relationship of the obtained results with a change in the social circumstance, although likely, is only hypothetical. Study has provided evidence of a connection between socioeconomic status, family variables and eating attitudes in young children in modern Poland.

disordered eating / children / primary schools

INTRODUCTION

Socioeconomic status (SES) is one of the many important factors that influence the various aspects of child development and child health from the very first stages of life [1]. One of the significant areas that SES has an impact on, are the problems of body image. SES influences both extremes of weight and body issues. In Western cultures, thinness is one of the most important indicators of affiliation to a higher social-economic class [2]. Thinness, understood as the capability of being able to control eating, is synonymous with displaying strong will, perfectionism, success and attractiveness [3]. Both epidemiological and cross-cultural data support the relevance of the thin ideal as social factors that contribute to the extreme weight control behaviours that characterize anorexia nervosa and bulimia nervosa. Research suggests that eating disorders may be prevented by interventions that challenge the thin ideal within peer groups of late adolescent females [4]. A number of studies indicate also a correlation between low SES

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and obesity, non-observance of dietary norms and a lack of interest in body shape and weight control in developed countries [5, 6].

Since the political turning point in Polish history in 1989, that brought an end to communism and Poland's dependence on the Soviet Union, the Polish society has undergone a dynamic process of profound transformation, the crucial stage being its accession to the European Union in 2004. According to Rathner, countries of the former Eastern Bloc, that are undergoing a process of westernisation, "face a double challenge, which includes first, the transition to capitalism with all the imponderables of early capitalist accumulation within a few years, and second, the immediate confrontation with globalisation and modernisation with their attendant disruptions" [3, p. 94]. Transformation has brought extreme economic difficulties to a significant proportion of Polish citizens [7, 8] heightening disparities between the earnings of individuals as well as households [9]. Important processes worth mentioning are the increasing divorce rate as well as the growing number of children born out of wedlock [10, 11]. Another noteworthy process that influences families is labour migration, that caused an increase in the number of children reared by a single parent, grandparents or child care institutions [12, 13]. The changes that Polish families are undergoing have also affected the values and norms that are important to the parents, and which they communicate to their children in a direct or indirect manner [14, 15]. Research results have indicated the polarisation of a number of attitudes and behaviours, which is clearly linked to class or socio-occupational affiliation [16].

It can be assumed that attitude towards the body and eating in Poland, as it undergoes a process of transformation, may be subject to multidirectional flows of influence replicating the aspirations and hardships of the Polish society as well as modifications of the family model. Therefore, a question arises concerning the correlation between family factors, SES and eating and body pathology in the transforming Poland.

MATERIALS AND METHOD

Research objective

The research objective was to evaluate the relationship between the problematic eating habits of children from Grades 4 to 6 and their socioeconomic status and family situation defined by:

- family structure, taking into account the economic migration phenomenon
- the level of education and employment status of both parents
- the mother's health
- the mother's subjective judgement of her family's functionality

Study group

The study group comprised school children that attended Grades 4 – 6 and their mothers. The cohort represented each of the traditional districts of Kraków: Śródmieście, Podgórze, Krowodrza and Nowa Huta. The choice of schools was made randomly to preserve the representativeness of the sample. The study only incorporated those 218 records (from 375 collected) which yielded survey results from both children and mothers. The average age of the studied children was 11.73 years old (standard deviation 0.93). There were 59.3% girls and 40.7% boys in studied group. The average age of mothers was 39.05 years old (standard deviation 5.08).

Method

The study made use of the Polish version of the Children's Eating Attitudes Test-26 (ChEAT-26) [17] which was compared with the family context variables mentioned in the research objective. The children were assessed using the ChEAT-26, while data relating to the family context were attained from mothers based on a survey they completed. Statistical analysis was carried out using the Kruskal-Wallis Test (equivalent to the ANOVA one-way analysis of variance) and the Spearman Rank-Order Correlation. The Polish version of Maloney's ChEAT-26 was based on the translation of the Polish version of the EAT-26 [18] with the addition of colloquial phrases and syntax from the translated English version of the ChEAT-26 [19]. Based on a qualitative analysis of seven factors extracted by the principal components method (with Varimax rotation and a scree plot) seven scales for the

test were created explaining 60.24% of the entire variance [17]. Based on our factor analysis of the statements of the ChEAT-26, the following names for the scales were proposed by authors of the Polish version [17] (Table 1):

Table 1. Scales for the ChEAT-26 questionnaire

	Name of scale	Abbreviation	Defining question (the highest common value)
Scale I	Desire to slim	(Des-slim)	I think a lot about wanting to be thinner
Scale II	Pressure to gain weight	(Press-gain)	Other people think I am too thin
Scale III	Compulsive-bulimic	(Comp-bul)	I have gone on eating binges where I feel that I might not be able to stop
Scale IV	Diet-weight loss	(Diet-loss)	I stay away from foods with sugar in them
Scale V	Excessively healthy eating	(Excess-healthy)	I cut my food into small pieces
Scale VI	Pre-compensatory-bulimic	(Pre-com-bul)	I feel very guilty after eating
Scale VII	Pleasure in overeating	(Pleasure-over)	I enjoy trying new rich foods

The socio-demographic questionnaire, intended for the mothers, consisted of questions that related to the objective variables that define a family, such as: family structure, parents' education level, the mother's state of health and her subjective judgement (on a scale of 1 to 10) of her state of health, as well as her family circumstances, employment status and financial circumstances.

Analyses were conducted in the whole group and in the groups divided according to gender if sample size was sufficient to precisely test each of the analysed variables.

RESULTS AND DISCUSSION

Results

The relations between the scales and variables of the family situation were the first to be analysed.

Table 2. Number of children in each child rearing category.

Marriage categories	N	%
1 – married biological parents	185	84.86
2 – divorced biological parents	6	2.75
3 – single mother	18	8.26
4 – mother living with stepfather or partner (who is not the father of the child)	8	3.37
5 – grandparents, other members of the family*	1	0.46
Total	218	100%

*Group 5 was not taken into account.

No statistically significant correaltions with the ChEAT-26 scales were observed. It was decided that an analysis should be conducted that contrasted children that are raised in a complete family unit with all other forms of childcare. No statistically significant differences were noted in this analysis either.

Analyses were not conducted in the groups that were divided according to gender due to a small number of subjects.

In the case of 13 children, one parent (mainly fathers) or both parents (1 case) were living abroad. It turned out that there was a link between emigration and higher results in Scales II (Pressure to gain weight) and III (Compulsive-bulimic) (Table 3). Table 4 – *next page*.

Table 3. ChEAT-26 scales/emigration

Scale	I	II	III	IV	V	VI	VII
	Des -slim	Press -gain	Comp -bul	Diet -loss	Excess -healthy	Pre- com-bul	Pleasure- over
P	0.92	**0.044**	**0.049**	0.894	0.478	0.499	0.718

Statistically significant results are shown bold

Due to a small number of study subject in the groups divided according to gender, analyses on emigration were not conducted.

The mother's education level variable was analysed next (Table 5 – *next page*). Due to the numbers in the groups, it was decided to combine the education levels into three categories: 1+2; 3+4; 5+6.

Statistically significant differences were noted in two scales (Table 6 – *next page*). Higher levels of maternal education appeared to be associated with a lower declared pleasure in eating, if not controlled by dietary standards (Scale VII – Pleasure associated with overeating), and with a growing awareness of dietary standards and

Table 4. Descriptive statistics for Scales II (Press-gain) and III (Comp-bul) of the ChEAT-26/emigration analysis.

Emigration	Yes		No	
Scale	II	III	II	III
	2.00	0.69	1.38	0.18
Median	2.00	0.00	0.00	0.00
Dominant	0	0	0	0
SD	1.87	1.70	2.46	0.86
Minimum	0	0	0	0
Maximum	6	6	12	9

Table 5. The mother's education level

Education	N
1 – primary school	1
2 – basic vocational school	22
3 – vocational high school	41
4 – high school	24
5 – undergraduate degree	23
6 – post-graduate degree or higher	80
Total	191

Table 6. ChEAT-26 scales/mother's education level

Scale	I	II	III	IV	V	VI	VII
	Des -slim	Press -gain	Comp -bul	Diet -loss	Excess -healthy	Pre-com -bul	Pleasure -over
P	0.757	0.667	0.540	0.974	**0.043**	0.276	**0.045**

Statistically significant results are shown bold

principles (Scale V – Excessively healthy eating). Scale V showed statistically significant differences between groups 1 and 2 (p = 0.039), whereas Scale VII showed statistically significant differences between groups 1 and 3 (p = 0.039) (Table 7).

Table 7. Descriptive statistics for Scales V (Excess-healthy) and VII (Pleasure-over) of the ChEAT-26/mother's education level analysis.

Education	1		2		3	
Scale/ Descriptive statistics	V	VII	V	VII	V	VII
	1.22	1.70	2.41	1.10	2.20	0.94
Median	0.00	2.00	2.00	1.00	2.00	1.00
Dominant	0	0	0	0	0	0
SD	1.783	1.329	2.499	1.216	2.256	1.016
Minimum	0	0	0	0	0	0
Maximum	7	4	11	5	10	3

A correlation was observed between the mother's level of education and Scales I (Desire to slim) and VII (Pleasure in overeating) in the group of girls (Table 8) however, there were no statistically significant correlations in the boys' group. ANOVA indicated statistically significant differences in Scale 1 in the girls' group, however post-hoc tests were unable to precisely show which groups differed between one another. In case of Scale VII, statistically significant differences occurred between groups 1 and 3 (p = 0.047) The trend was the same as for the group that was not divided according to gender (Table 9).

Table 8. Females: ChEAT-26 scales/mother's education level

Scale	I	II	III	IV	V	VI	VII
	Des -slim	Press -gain	Comp -bul	Diet -loss	Excess -healthy	Pre-com -bul	Pleasure -over
P	**0.046**[1]	0.526	0.826	0.974	0.097	0.203	**0.038**

[1]ANOVA indicates the occurrence of statistically significant differences, however post-hoc tests cannot precisely show which groups differ from one another

Statistically significant results are shown bold

Table 9. Females: Descriptive statistics for Scales I (Des-slim) and VII (Pleasure-over) of the ChEAT-26/mother's education level analysis.

Education	1		2		3	
Scale/Descriptive statistics	I	VII	I	VII	I	VII
$\bar{x}$	1.61	1.78	1.45	0.98	2.75	0.90
Median	0	2	0	0	1	0
Dominant	0	3	0	0	0	0
SD	3.310	1.353	2.873	1.310	3.992	1.077
Minimum	0	0	0	0	0	0.90
Maximum	11	4	10	5	15	0.155

The same analysis was carried out within the context of the father's education level (Table 10 – *next page*). The same coding was applied as for the mother's education level .

The differences proved to be statistically significant in Scale VI (Pre-compensatory-bulimic) (Table 11– *next page*). Results showed that there is a link between the fathers with higher levels of education and a lower intensity of binge eating induced by anxiety (Table 12 – *next page*).

Table 10. Father's education level

Education	n
1 – primary school	2
2 – basic vocational school	41
3 – vocational high school	54
4 – high school	15
5 – undergraduate degree	12
6 – post-graduate degree or higher	62
Total	186

Table 11. ChEAT-26 Scales/father's education level

Scale	I	II	III	IV	V	VI	VII
	Des -slim	Press -gain	Comp -bul	Diet -loss	Excess -healthy	Pre-com -bul	Pleasure -over
P	0.971	0.546	0.308	0.769	0.710	**0.028**	0.966

Statistically significant results are shown bold

Table 12. Descriptive statistics for Scale VI (Pre-compensatory-bulimic) ChEAT-26/Father's education level

Education/ Descriptive statistics	1	2	3
$\bar{x}$	0.19	0.03	0.00
Median	0.00	0.00	0.00
Dominant	0	0	0
SD	0.63	0.23	0.00
Minimum	0	0	0
Maximum	3	2	0

No statistically significant differences were observed when the group was divided according to gender.

Another variable that was submitted to analysis was the mother's state of health (Table 13). In this case, it was decided to employ a coding system that distinguished 8 categories: lack of illness and all confirmed illnesses.

Table 13. The mother's state of health

State of health	N
1 – diabetes	4
2 – atherosclerosis	1
3 – hypertension	9
4 – heart disease	5
5 – allergies	23
6 – others	28
7 – no illnesses	89
8 – more than one illness	7
Total	166

No statistically significant correlations were noted.

The mothers were also asked for a subjective assessment of the state of their own health based on a three-point scale (good, moderate, poor). No significant differences were observed.

An analysis in the girls' group was not possible due to an insufficient number of study subjects. No statistically significant differences were observed in the boys' group.

The relation between the ChEAT-26 scales and the subjective assessment of the mother's family situation, employment status and financial circumstances was submitted to analysis next. The mothers based their assessment on a ten-point graduated scale with 1 being "very bad" and 10 being "very good". The relation was investigated using the Spearman Rank-Order Correlation.

A positive correlation was noted between the mothers' assessment of family success and Scale V (Excessively healthy eating) and also between her assessment of employment status and Scale IV (Diet-weight loss) (Table 14).

Table 14. Correlations: ChEAT-26 scales/the mother's subjective judgement of her families functionality

Scale/Family situation		
S. V: Excess-healthy	Correlation coefficient	0.199
	Significance (bilateral)	0.007
Scale/Employment status		
S. IV: Diet-loss	Correlation coefficient	0.160
	Significance (bilateral)	0.035

In the female group, a positive correlation was observed between: the mother's assessment of her family situation and Scale V (Excessively healthy eating), the mother's assessment of her financial status and Scale III (Compulsive-bulimic) and between the mother's judgment of her employment status and Scale IV (Diet-weight loss). In the male group, a negative correlation was noted between the mother's assessment of her employment status, Scale V (Excessively healthy eating) and Scale VI (Pre-compensatory-bulimic) (Table 15 – *next page*).

Statistically significant results are shown bold

Table 15. Correlations between genders: ChEAT-26 scales/ the mother's subjective judgement of her families functionality.

Gender		Females	Males
Scale/Family situation			
S. V: Excess-healthy	Correlation coefficient	**0.267****	
	Significance (bilateral)	**0.008**	
Scale/Financial status			
S. III: Compulsive-bulimic	Correlation coefficient	**0.199***	
	Significance (bilateral)	**0.048**	
Scale/Employment status			
S. IV: Diet-loss	Correlation coefficient	**0.257***	
	Significance (bilateral)	**0.012**	
S. V: Excessively healthy eating	Correlation coefficient		**-0.238***
	Significance (bilateral)		**0.034**
S. VI: Pre-compensatory-bulimic	Correlation coefficient		**-0.231***
	Significance (bilateral)		**0.039**

* p<0.05, ** p<0.001

DISCUSSION

The aim of this study was to evaluate the relationship between variables that describe the socioeconomic status of children and their attitude towards body image and dietary behaviors.

Literature available on the subject, defines SES in relation with such variables as parental education, occupation and the financial status of a family. Other variables such as health and family structure were treated as separate variables but are obviously connected with the SES of families [1]. In this study a decision was made to investigate them due to the significance that they may have in the general functioning of a family and due to probable cultural differences in defining the SES of families in Poland. There was no significant link between family structure and the investigated scales. Many scientific studies have demonstrated the negative impact that a lack of stability in a family environment has on the occurrence of psychological problems in children [20–23]. Some modern research studies are going beyond studying only the family structure and are starting to explore the processes and changes in family status that influence a child's psychological state [20]. The belief, that family structure might be associated with the emotional problems of eating, may be too simplistic. A reason for not achieving statistically significant observations might be the fact that only family structure has been analyzed without giving regard to the relationships within it. The study was based on questionnaires completed by mothers. The number of single parents proved to be lower than expected [11]. The responses obtained in the questionnaires might not be accurate. Lone parenthood is still a cause for shame and a reason for social ostracism in Poland. Parental separation was also not taken into account here. One may also doubt the mothers honesty when asked about the family structure of her family.

Our research support the results of studies showing that parents have a significant influence on the development of their children's body image, body image disturbances and disordered eating [24-26]. Associations between several variables describing the socioeconomic situation of a family and the children's eating attitudes proved to be significant. Emigration of one of the parents (mainly fathers) showed a statistically significant association with a feeling of greater external pressure for being thin and having an urge to binge that is difficult to control. It is worth mentioning that both of these scales were negatively correlated with BMI [17]. One of the possibilities is that the results obtained in the ChEAT-26 are the expression of a significant change in the family situation, manifested by weight fluctuations and contradictory reactions to stress. It must be noted that only those children participated in the study whose entire families did not emigrate. There may be various reasons for such a decision, for example they may be associated with a short time period of the planned emigration or the type of marital relationship limitedly based on relationship closeness or the actual break-up of a marriage. Emigration may also be associated with a lack of livelihood, a social advancement or even with enhancing one's professional development. However, an insufficient number of study subjects in the group significantly reduces the potential for drawing conclusions in this regard.

Parents with higher education levels tend to have a stronger influence on their child's eating habits. The children of such parents are more aware of dietary standards, they tend to control their eating habits more but they also get less pleasure out of eating food. Having the mother achieve professional success, in her estimation, turned out to be positively correlated with an increased desire in her child to lose weight. A mother's positive assessment of her family was correlated with her child's greater compliance with the principles of healthy eating.

Significant correlations in this respect were reported depending on gender. The results observed in the girls' group were similar to those of the whole group. In the boys' group, however, two negative correlations were observed that showed less attention to healthy eating or feeling guilty after overeating in families in which the mother was happy with her professional status. This result is ambiguous. The men's attitude towards weight seems to be associated less with the socio-economic status of the family in the transformation context [2]. Research conducted on the population of Kraków over the last 30 years confirms an increase in the prevalence of overweight and obesity in boys and a stabilisation/ slight decrease in the prevalence overweight and obesity in girls [27-29]. A question about what the families are really like in which the mother is satisfied with her professional status arises. Does the mothers commitment to her work make her less committed to taking care of her children, and so her children do not have dietary standards communicated to them? Are these boys poorly taken care of or are they more self-confident and enjoy eating without having a guilty conscious? An analysis of the results achieved by the fathers may be an essential complement of this picture. It may be suggested that no fuller picture can be provided until an analysis is conducted on the correlations between gender and the different variables describing social class, body mass and both parents attitudes towards nutrition [5, 30, 31]. Overall, the obtained results support indications that there are differences between boys and girls when it comes to their attitudes towards their body and eating. These differences become apparent during early school years.

The obtained results encourage an examination of the correlation between the attitude to body mass and social classes. What makes the investigation more difficult is the fact that in today's changing Poland, social classes are not clearly defined [16]. A number of academic studies have indicated, however, that even within Poland's cultural context, i.e., in an advanced stage of transformation, those dimensions that are being used to define social classes (level of education, wealth, success in life) are related to the nutritional attitudes of parents, children and objective physical fitness indicators [32, 33]. It remains an open question whether the dependencies observed in Poland are in fact similar to those that are characteristic of the developed countries with a western culture or are also associated with the continuing processes of transformation in Poland.

In the above contexts, body mass may have different connotations in Poland today. Depending on the child's gender, social background, parents' level of education, place of residence, family aspirations, health, cultural aspirations, or whether the child is overweight, it may be perceived as attractive / unattractive, reflecting low status / wealth, or as healthy or at risk of disease.

The results of this study indicate the impact that the variables, describing social class, can have on the eating attitudes of the children themselves. Are these attitudes pro-health or anti-health? The scale used had no cut-off points separating favourable behaviours from those that are clearly unfavourable. The tool used was not tested to determine its validity or whether it was sensitive enough to evaluate incidences of psychopathology associated by the occurrence of eating disorders. Furthermore, the original version was more research-like in nature than a screening test [34]. The differences between the results were statistically significant, however the results achieved by the participants were relatively low. The evaluation of the results was also hampered by the fact that the parents of a significant proportion of the children for whom ChEAT-26 scores were calculated, failed to return the questionnaire defining their family situation. It should, however, be noted that a majority of the statements appearing in the questionnaire refer to a sense of emotional

discomfort (I feel guilty after eating) or to risky behaviours (I have the urge to vomit after eating). It is therefore possible to speak of an overall trend of associations between the investigated variables and the children's pathological behaviours rather than of finding a clear relationship between them. The question of how studied variables influence the attitudes of children, was not the subject of analysis in this study. It can be assumed, based on the results of other studies, that comments directed at children by their parents as well as observations of their behaviours, may have been relevant. Despite the young age of the respondents, mass media and group pressure may play a significant role [35]. Another important issue are the possible consequences of the observed relationships. This is particularly important because a significant amount of data indicates that after 1989, eating disorders were one of the fastest growing diagnosis in teenage girls [36]. Experimental findings have confirmed that perceived pressure to be thin and thin-ideal internalization are casual risk factors of body dissatisfaction, dieting, negative affect and eating pathology [35]. This issue requires further study, taking into account the afore mentioned cultural specificity. The paths that lead to the development of eating disorders may be unalike in different cultures or at different stages of westernization. The parents' attitude towards eating, which is less important in the early stages of transformation may, with time, take on greater importance in the development of an eating pathology [37].

Any discussion concerning the relationship of the obtained results with a change in the social circumstances although likely, is only hypothetical. Maloney's first publications on the attitudes of children towards eating dates back to 1988 [34] when nobody investigated these issues in Poland. In 1988 in Poland, even among adolescents, eating disorders were diagnosed incidentally [36]. Our study has, however, provided clear evidence that there is a connection between socioeconomic status, and eating attitudes in young children in modern Poland

CONCLUSIONS

Based on the analyses of the results achieved in the research, the following conclusions may be drawn:

Family structure did not differentiate the children significantly within the context of the eating problems they displayed.

The parents' level of education and the mothers' assessment of her family turned out to differentiate children's eating attitudes.

A mother's satisfaction with her family was related to an exacerbation of disordered eating attitudes and dietary behaviours in the girls' group, whereas an opposite dependency was observed in the boys' group.

REFERENCES

1. Bradley RH, Corwyn RF. Socioeconomic status and child development. Annu Rev Psychol. 2002; 53: 371–399.
2. Polivy J, Herman PC. An evolutionary perspective on dieting. Appetite. 2006; 47(1): 30–35.
3. Rathner G. Post-communism and the marketing of the thin ideal. In: Nasser M, Katzman MA, Gordon RA, editors. Eating disorders and cultures in transition. New York: Brunner-Routledge; 2001. p. 93–110.
4. Keel PK, Forney JK. Psychosocial risk factors for eating disorders. Int J Eat Disord. 2013; 46(5): 433–439 (article first published online: 9 May 2013), DOI: 10.1002/eat.22094
5. O'Dea A, Caputi P. Association between socioeconomic status, weight, age and gender, and the body image and weight control practices of 6- to 19-year-old children and adolescents. Health Education Research. 2001; 16(5): 521–532.
6. McLaren L. Socioeconomic status and obesity. Epidemiol Rev. 2007; 29: 29–48.
7. Kupiszewski M. Migration in Poland in the period of transition — the adjustment to the labour market change. Discussion Paper no. 266. Project on Intergenerational Equity. Tokyo: Institute of Economic Research, Hitotsubashi University; 2005.
8. Heinen J, Wator M. Child care in Poland before, during, and after the transition: still a women's business. Social Politics. 2006; 13(2): 189–216.
9. Transformacja społeczno-gospodarcza w Polsce. Warszawa: Rządowe Centrum Studiów Strategicznych; 2002.
10. Kołaczek B. Uwarunkowania demograficzne, społeczno-gospodarcze i kulturowe polityki rodzinnej w krajach Unii Europejskiej. In: Balcerzak-Paradowska B, Szymborski J, editors. Polityka rodzinna w krajach Unii Europejskiej – wnioski dla Polski. Warszawa: Biul. Rzecznika Praw Obywatelskich. Zeszyty Naukowe; 2009. p. 31–54.
11. Sytuacja demograficzna w Polsce. Materiał na konferencję prasową w Warszawie w dniu 23 października 2007. Warszawa: Główny Urząd Statystyczny; 2007.

12. Kaczmarczyk P, Okólski M. Demographic and labour-market impacts of migration on Poland. Oxford Review of Economy Policy. 2008; 24(3): 599–624.
13. Nowak M, Gawęda A, Janas-Kozik M. Zjawisko eurosieroctwa a kierunki pracy terapeutycznej i leczenia psychiatrycznego – prezentacja przypadku. Psychiatr Pol. 2012; 46(2): 295–304.
14. Slany K. Dylematy i kontrowersje wokół małżeństwa i rodziny we współczesnym świecie. In: Kowalewski TJ, editor. Wybrane zagadnienia demografii. Łódź: Zakład Demografii i Statystyki; 2004.
15. Beisert M. Przemiany współczesnej rodziny polskiej. Rocznik Lubuski. 2006; 32(2): 19–37.
16. Janicka K. Zmiany w strukturze społecznej w wyniku transformacji ustrojowej w Polsce. Historyczno-polityczne tło przemian społecznych. Rocznik Lubuski. 2010; 36(2): 33–51.
17. Pilecki MW, Kowal M, Woronkowicz A, Kryst Ł, Sobiecki J. Psychometric properties of Polish version of the Children's Eating Attitudes Test. Archives of Psychiatry and Psychotherapy. 2013; 15(1): 35–43.
18. Włodarczyk-Bisaga K. Ocena własności psychometrycznych EAT26 dla populacji dziewcząt nastoletnich. (Disordered attitudes and behaviors towards eating.) Unpublished doctoral thesis. Warszawa: IPiN; 1992.
19. Maloney MJ, McGuire J, Daniels SR, Specker B. Dieting behavior and eating attitudes in children. Pediatrics. 1989; 84: 482-489.
20. Carr D, Springer KW. Families and health in the 21st century. Journal of Marriage and Family. 2010; 72(3): 743–761.
21. McLanahan S, Bumpass L. Intergenerational consequences of family disruption. American Journal of Sociology. 1988; 94(1): 130–152.
22. Krein SF, Beller AH. Educational attainment of children from single-parent families: differences by exposure, gender, and race. Demography. 1988; 25(2): 221–234.
23. Amato PR. Research on divorce: continuing trends and new developments. Journal of Marriage and Family. 2010; 72(3): 650–666.
24. Rodgers R, Chabrol H. Parental attitudes, body image disturbance and disordered eating amongst adolescents and young adults: a review. Eur Eat Disord Rev. 2009; 17(2): 137–51.
25. Ventura K, Birch LL. Does parenting affect children's eating and weight status? International Journal of Behavioral Nutrition and Physical Activity. 2008; 5(15): http://www.ijbnpa.org/content/5/1/15.
26. Robinson TN, Chang JY, Haydel KF, Killen JD. Overweight concerns and body dissatisfaction among third-grade children: the impacts of ethnicity and socioeconomic status. J Pediatr. 2001; 138(2): 181–87.
27. Kowal M, Kryst Ł, Woronkowicz A, Sobiecki J, Brudecki J, Żarów R. Long-term changes in BMI and adiposity rebound among girls from Kraków (Poland) over the last 30 years (from 1983 to 2010). American Journal of Human Biology. 2013; 25(3): 300–306.
28. Kowal M, Kryst Ł, Sobiecki J. Woronkowicz A. Secular trends in body composition and frequency of overweight and obesity in boys aged 3–18 from Krakow, Poland, within the last 30 years (from 1983 to 2010). J Biosoc Sci. 2013; 45(1): 111–134.
29. Kowal M, Kryst Ł, Woronkowicz A, Sobiecki J. Long-term changes in body composition and prevalence of overweight and obesity in girls (aged 3–18) from Kraków (Poland) from 1983, 2000 and 2010. Ann Hum Biol. 2014. DOI:10.3109/03014460.2013.878394 [in print].
30. Wang Z, Byrne M, Kenardy, Hills AP. Influences of ethnicity and socioeconomic status on the body dissatisfaction and eating behaviour of Australian children and adolescents. Eating Behaviors. 2005; 6(1): 23–33.
31. Koziel S, Kolodziej H, Ulijaszek SJ. Parental education, body mass index and prevalence of obesity among 14-year-old boys between 1987 and 1997 in Wrocław, Poland. Eur J Epidem. 2000; 16(12): 1163–67.
32. Bojar I, Humeniuk E, Wdowiak L, Miotła P, Warchoł-Sławińska E, Włoch K. Zachowania żywieniowe kobiet ciężarnych. Problemy Higieny i Epidemiologii. 2007; 88(1): 74–77.
33. Resiak M. Wykształcenie rodziców a BMI, sprawność fizyczna i oglądanie telewizji u dzieci 6-letnich. Ann Univers Mariae Curie-Sklodowska Lublin– Polonia. 2005; 60(supl. 16)(443): 469–472.
34. Maloney MJ, McGuire JB, Daniels SR. Reliability testing of a children's version of the Eating Attitude Test. J Am Acad Child Adolesc Psychiatry. 1988; 27(5): 54l–543.
35. Stice E. Risk and maintenance factors for eating pathology: a meta-analytic review. Psychol. Bull. 2002; 128(5): 825-848. http://dx.doi.org/10.1037%2F%2F0033-2909.128.5.825
36. Pilecki MW, Nowak A, Zdenkowska-Pilecka M. Change in the frequency of consultations concerning eating disorders in the Department of Child and Adolescent Psychiatry in Kraków (Poland) in the years 1988–2004. Archives of Psychiatry and Psychotherapy. 2009; 11(2): 35–40
37. Pilecki MW, Józefik B, Sałapa K. Disordered eating among mothers of Polish patients with eating disorders. Med Sci Mon. 2012; 8(12): CR758–CR764.